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Raffel et al.

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[54] **METHOD AND APPARATUS FOR THE PRODUCTION OF REACTION MIXTURES FROM LIQUID REACTION COMPONENTS**

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[58] **Field of Search** ..... 23/230 A, 253 A; 73/195, 199; 260/698

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[57] **ABSTRACT**

The instant invention is directed to a method and apparatus for measuring the proportion of undissolved gas in a liquid component for the production of foam materials, particularly, those based on polyurethane. The method is based on the equation of state of ideal gases (Boyle-Mariot Law: $P \cdot V = \text{constant}$) at constant temperatures. The gas contained in a liquid component charged with gas increases its volume under expansion according to the above equation. The gas expansion causes expansion of the liquid gas mixture. The difference in the volumetric flow rate of the liquid, at two differing pressures, is therefore a measurement of the quantity of gas present in the liquid. The apparatus consists of one volumetric flow rate measurement unit connected upstream of a pressure drop unit, a second volumetric flow rate measurement unit connected downstream of the pressure drop unit and a differential value indicator connected to the first and second volumetric flow rate measurement units.

12 Claims, 4 Drawing Figures